

## Spontaneous Ejaculations Associated with Aripiprazole

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### ABSTRACT

Sexual side effects are common with antipsychotic use. Spontaneous ejaculations without sexual arousal have been previously described with several typical and atypical antipsychotics. We report the case of a man who had spontaneous ejaculations after stopping risperidone and starting 30 mg/day aripiprazole. Spontaneous ejaculations ceased 3 days after decreasing the aripiprazole dose to 15 mg/day. He denied sexual fantasies or increased sexual desire during the period in which he had spontaneous ejaculations. The partial agonistic effect of aripiprazole on D2 receptors may have augmented

the mesolimbic dopaminergic pathway, which was suppressed by risperidone, causing spontaneous ejaculations in this patient. Serotonergic effects of aripiprazole should also be considered. This unusual side effect should be questioned, particularly in patients who receive aripiprazole after D2-blocking antipsychotics; otherwise, this side effect may cause embarrassment and noncompliance.

**Keywords:** Aripiprazole, spontaneous ejaculation, risperidone

### INTRODUCTION

Sexual side effects due to antipsychotic drugs are commonly observed (1). Impotence and erectile dysfunction are the most frequent sexual side effects, but spontaneous ejaculations without sexual arousal has also been described previously with zuclopentixol (2), trifluoperazine and thiotixen (3), risperidone (4), and ziprasidone (5). To the best of our knowledge, there is no report associating aripiprazole with spontaneous ejaculations.

### CASE

Mr A was 24 years old and was married for 5 years. He was being followed at a psychiatry outpatient clinic for 3 years, with a diagnosis of paranoid schizophrenia. He was using 4 mg/day risperidone for 3 years. His delusions were controlled with this treatment. After his marriage, he complained of erectile dysfunction and loss of sexual interest, and we planned to change his treatment. Risperidone was stopped, and aripiprazole, which has a lower sexual side effect profile, was prescribed at a dose of 30 mg/day. He came to our clinic 2 weeks after the introduction of aripiprazole, complaining of spontaneous ejaculations without sexual arousal 3–4 times a day. He stated that ejaculations had started 1 week after the introduction of aripiprazole. He was consulted to the urology department, and no organic pathology was detected. He continued aripiprazole at the same dose for 1 more week and came to control again. He was still complaining of spontaneous ejaculations; therefore, the aripiprazole dosage was reduced to 15 mg/day. Spontaneous ejaculations stopped 3 days after dose reduction, and he denied loss of sexual interest or erectile dysfunction. In his follow-up, he used 15 mg/day aripiprazole for 6 months, and he did not report recurrence of spontaneous ejaculations. Remission in psychotic symptoms also sustained during follow-up. Written informed consent was taken from the patient in order to publish his data.

### DISCUSSION

Antipsychotic drugs generally act to decrease libido by antagonising dopamine receptors and increasing prolactin levels (6,7). In contrast, dopamine agonism caused by certain drugs such as L-dopa, amphetamine, and pramipexole is associated with increased sexual desire and sexual arousal, which are reported by the patients as increased sexual fantasies, erections, and sexual activities (8). Brain dopamine systems between the hypothalamus and limbic system are thought to be the main sexual excitatory systems (9).

Aripiprazole is a unique antipsychotic drug because it causes a partial agonism at the dopamine D2 receptor (10). Risperidone decreases dopaminergic transmission and is therefore frequently associated with sexual side effects (11). Hence, aripiprazole may act to boost dopaminergic activity at the mesolimbic dopaminergic circuit, which was previously suppressed by risperidone. Aripiprazole also acts on serotonergic receptors and has partial 5-HT<sub>1A</sub> agonist and 5HT<sub>2A</sub> antagonistic properties (12). Meston and Frohlich (13) reported that 5-HT<sub>1A</sub> agonism and 5HT<sub>2A</sub> antagonism promote sexuality. Lack of hyperprolactinemia in addition to these receptor effects may be the cause of spontaneous ejaculations in our patient, although further research is needed to clearly explain the sexual effects of aripiprazole.



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Cheon et al. (14) reported two female patients who reported hypersexuality (demand for daily sexual intercourse, frequent use of online pornography, frequent masturbation, and unprovoked sexual urges toward strangers) after change in treatment regime from risperidone to aripiprazole. Vrignaud et al. (15) reported a male patient who had hypersexuality after aripiprazole treatment. Our patient had spontaneous erections and ejaculations after substituting aripiprazole for risperidone, but he denied increased sexual desire during these ejaculations.

Increased sexual desire and/or spontaneous sexual arousal should be questioned in schizophrenia patients taking aripiprazole, particularly if it is introduced after the cessation of D2 antagonists such as risperidone. If unrecognized, this unusual side effect may lead to embarrassment of the patient and noncompliance with treatment.

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